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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,987	08/18/2006	Yoshimi Kawashima	294571US0PCT	2471
22850 7590 11/12/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER ZIMMER, ANTHONY J				
ART UNIT 1793		PAPER NUMBER		
NOTIFICATION DATE 11/12/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/589,987

Applicant(s)

KAWASHIMA ET AL.

Examiner

ANTHONY J. ZIMMER

Art Unit

1793

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-38 is/are pending in the application.
- 4a) Of the above claim(s) 20, 21, 24-30, 33, 34 and 36-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19, 22, 23, 31, 32 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/13/2006, 6/18/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I and Species B in the reply filed on 9/22/2008 is acknowledged.

Claims 20-21, 24-30, 33-34, and 36-38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions or species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujitani '734.

In regard to claim 19, Fujitani teaches a catalyst containing cerium oxide, manganese oxide, and alumina impregnated with a precious metal (palladium or platinum). See catalysts A8-A14 in Tables 3 and 4 and Examples 1 and 2.

In regard to claim 22, Fujitani teaches first impregnating the cerium component, drying, and calcining followed by impregnating the manganese component, drying and calcining. See column 4, line 66 – column 5, line 6. Though the calcination temperatures are not mentioned in Fujitani, these limitations are product-by-process limitations and limit the product in regard to the structural implications of the process steps. In the

instant case, the calcinations as provided in the claim functions to convert the metal precursors into their respective oxides. Fujitani teaches that the precursors are heated and converted into their oxides, and thus the limitations of the claim are met. See MPEP 2113.

Claims 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Qin '239.

In regard to claim 19, Qin teaches a catalyst containing zirconium oxide, manganese oxide, and alumina supporting palladium. See column 6, line 41 – column 7, line 7 and claim 1.

In regard to claim 22, Qin teaches impregnating alumina with a zirconium component and calcining at 400°C followed by impregnating a manganese component and calcining at 750°C. See column 6, line 41 – column 7, line 7 and claim 1. Though the second calcination temperature is not the same as required by the claim, the temperature limitation in the claim is a product-by-process limitation that limits the claim in regard to the structure implied therein. Since both calcinations function to convert the metal precursors into their respective oxides, the limitations of the claim are seen to be met. See MPEP 2113.

Claims 19, 23, 32, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by the journal article by Jang et al.

In regard to claims 19 and 35, Jang teaches a catalyst comprising lanthanum oxide, manganese oxide, strontium oxide (See Section 2.1), teaches that these catalysts prepared with NH_4OH contain alumina (See section 3.1), and teaches supporting 2 wt.% platinum (Section 2.1).

In regard to claims 23 and 32, Jang teaches a ratio of elements of $\text{Sr}_{1-x}\text{La}_x\text{MnAl}_{11}\text{O}_{19-\delta}$, wherein $x = 0, 0.4, \text{ and } 1$ (see Section 2.1). Thus when $x=0.4$ the lanthanum oxide component is ~8 wt.% and the manganese oxide component is ~11 wt.%.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jang et al. in view of the journal article by Sekizawa et al.

Jang does not teach the palladium in reduced form. However, Sekizawa teaches using a similar catalyst in the same regard as Jang (methane oxidation), and previous to use Sekizawa teaches reducing with hydrogen. See second paragraph in the right-hand column of Sekizawa. Thus, it would have been obvious to one of ordinary skill in the art to reduce the palladium of Jang in order to affect the predictable result of catalytically oxidizing methane.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Qin '239.

Qin teaches reduced palladium present in a weight ratio of 0.1 - 0.3 and 0.05 - 0.12 wt. %. See column 5, lines 11-24. Overlapping ranges are *prima facie* obviousness. See MPEP 2144.05.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. ZIMMER whose telephone number is (571)270-3591. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Steven Bos/
Primary Examiner, Art Unit 1793